

REMARKS

This is in reply to the Office Action mailed 9 September 2003. By this Amendment claims 1, 2, 7, 8, 13, 14, 19 and 20 have been amended. New claims 25 - 27 have been added.

Independent claims 1, 7, 13 and 19 have been amended to include the limitation that the voltage of the cooling element automatically varies in proportion to the current provided to the primary circuit. This feature was formerly recited in claims 2, 8, 14 and 20, which have been amended accordingly.

New claims 25 - 27 also relate to varying the voltage of a cooling element automatically in proportion to the current provided to a parasitic inductance. As indicated in the paragraph bridging pages 6 and 7 of the application, Applicant's invention is suitable for any circuit where an overvoltage can occur on a switch due to a leakage inductance of a transformer or an inductor or otherwise. Page 9, lines 3 - 6 of the application describes automatically adjusting the power supply for the cooling element in proportion to changes in the amount of current delivered to the switches switching the parasitic inductance. There is therefore no need to provide an auxiliary power supply for the cooling system in the Applicant's system.

The Examiner is respectfully requested to withdraw the 35 U.S.C. § 103(a) obviousness rejection in view of the claim amendments and the following submissions. The Examiner has acknowledged that the Ferraro reference (U.S. Patent No. 4,438,486) does not disclose any types of cooling elements. As mentioned at page 5 of the Applicant's application, Ferraro does not teach or suggest the desirability of applying parasitic inductive energy in a manner useful for the protection of the switches themselves, such as by cooling the switches or other elements of the switching power supply.

Bendikas et al. (U.S. Patent No. 6,368,064) discloses a conventional cooling element (12) powered by a power converter (24) which utilizes feedback control. Bendikas is intended to provide redundant power and fan speed control to a plurality of fans. In order to operate, Bendikas requires specialized fan speed controller(s). For example, first and second fan speed controllers 20, 22 are provided. The Applicant's system, by contrast, provides feedforward control for a fan (or other cooling element) which is directly proportional to the current delivered to the parasitic inductance. No separate fan speed controllers are required. Moreover, variations in fan speed will be implemented immediately resulting in a faster response time than systems using temperature sensors or

other feedback controls (see pages 5 - 6 of Applicant's disclosure). In the Applicant's invention, energy recovered from parasitic losses is employed for cooling purposes utilizing a minimal number of components. Bendikas et al. does not teach or suggest these features.

The Examiner has alleged that it would be obvious to someone skilled in the art to combine the snubber circuit of Ferraro with the cooling element of Bendikas et al. to arrive at Applicant's invention. It is submitted that there is no suggestion or incentive to modify or to combine the teachings of Ferraro with the Bendikas et al. in the manner contemplated by the Examiner. As the Court of Appeals for the Federal Circuit held in *In re: Fritch*, 23 USPQ (2d) 1780 at 1783 (CAFC, 1992):

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teaching of references can be combined only if there is some suggestion or incentive to do so. Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.

As submitted above, neither Ferraro nor Bendikas et al. teach or suggest the desirability of using recovered parasitic inductive energy in a self-regulated manner for cooling switching power supplies or other electrical components. Further, neither of the prior art references include the limitation that the voltage of the cooling element varies in proportion to the current provided to the primary circuit having the parasitic inductance.

It is submitted that this application is now in condition for allowance. Favorable action at an early date is respectfully requested.

Respectfully submitted,



By:

Thomas W. Bailey
Registration No. 36,411
tel: 604.669.3432 ext. 219
fax: 604.681.4081
e-mail: tbailey@patentable.com

Vancouver, B.C.
CANADA

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